

ABSTRACT OF THE DISCLOSURE

An organic substance removing method is disclosed which removes an organic substance having an ion-implanted region, from above a substrate by utilization
5 of a plasma of at least an oxygen-containing gas, the method comprising:

the first step of introducing an oxygen-containing gas, a hydrogen-containing gas, and a fluorine-
containing gas into a reaction chamber and generating a
10 plasma of the gases introduced into the reaction chamber to effect a plasma processing; and

the second step of introducing into a reaction chamber a gas less prone to etch an exposed surface of the substrate than the gases introduced into the
15 reaction chamber in the first step, and generating a plasma of the gas introduced into the reaction chamber to effect a plasma processing.